CLAIMS

1. A radio communication receiver comprising:

analog signal generating units in number P (where P is a natural number) each of which receives a signal and generates a base band analog signal from the received signal;

A/D converters in number P each of which converts the analog signal of the corresponding analog signal generating unit into digital signals; and

a demodulator which demodulates the digital signal output by the corresponding A/D converter based on a desired method, the demodulator having,

soft-decision output equalizers in number P each of which makes a soft decision on the digital signal output by the corresponding A/D converter;

a combining unit which combines the results of the soft decisions by the soft-decision output equalizers and outputs the result as a soft-decision value; and

an error correcting unit which performs error correction processing with respect to the soft-decision value output by the combining unit.

2. A radio communication receiver comprising:

analog signal generating units in number P (where P is a natural number) each of which receives a signal and generates a base band analog signal from the received signal;

A/D converters in number P each of which converts the analog signal of the corresponding analog signal generating unit into digital signals; and

a demodulator which demodulates the digital signal output by the corresponding A/D converter based on a desired method, said demodulator having,

level-adjusting units in number P each of which adjusts a power level of the digital signal output by the corresponding A/D converter;

soft-decision output equalizers in number P each of which makes a soft decision with respect to the signal output by the corresponding level-adjusting unit;

a combining unit which returns a result of the soft decision to a status before the level adjustment, combines the results of the soft decisions by the soft-decision output equalizers at the original power levels and outputs the result as a soft-decision value; and

an error correcting unit which performs error correction processing with respect to the soft-decision value output by the combining unit.

3. A radio communication receiver comprising:

analog signal generating units in number P (where P is a natural number) each of which receives a signal and generates a base band analog signal from the received signal;

A/D converters in number P each of which converts the analog signal of the corresponding analog signal generating unit into digital signals; and

a demodulator which demodulates the digital signal output by the corresponding A/D converter based on a desired method, said demodulator having,

soft-decision output equalizers in number P each of which makes a soft decision on the digital signal output by the corresponding A/D converter;

noise-power estimating units in number P each of which estimates noise power of the digital signal output by the corresponding A/D converter;

a combining unit which divides results of the soft decisions by corresponding noise power respectively, combines the results of the division to output a soft-decision value; and

an error correcting unit which performs error correction processing with respect to the soft-decision value output by the combining unit.

4. A radio communication receiver comprising:

analog signal generating units in number P (where P is a natural number) each of which receives a signal and generates a base band analog signal from the received signal;

A/D converters in number P each of which converts the

analog signal of the corresponding analog signal generating unit into digital signals; and

a demodulator which demodulates the digital signal output by the corresponding A/D converter based on a desired method, said demodulator having,

soft-decision output equalizers in number P each of which makes a soft decision on the digital signal output by the corresponding A/D converter based on common reliability information that is fed back after error correction;

a combining unit which combines the results of the soft decisions by the soft-decision output equalizers and outputs the result as a soft-decision value; and

an error correcting unit which performs error correction processing with respect to the soft-decision value output by the combining unit, generates reliability information of decoded bits, and feeds back the reliability information to the soft-decision output equalizers.